

Investigation No.: 12-10-013
Exhibit No.: SCE-17



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(U 338-E)

***December 14, 2012, Letter From Mitsubishi Heavy
Industries to Peter Dietrich Regarding Repair Options***

Before the
Public Utilities Commission of the State of California

Rosemead, California
May 14, 2013



Via E-mail Attachment and Post
December 14, 2012

MKT-NSL-120062

Peter Dietrich
Senior President & Chief Nuclear Officer
Southern California Edison
P.O. Box 128
San Clemente, CA 92672

Subject: Repairs of the SONGS Units 2 and 3 Steam Generators

Dear Mr. Dietrich:

This letter is in response to your November 28, 2012 letter requesting a specific repair and/or replacement plan and schedule for the SONGS Unit 2 and Unit 3 steam generators by December 28, 2012. In your letter, Southern California Edison ("SCE") also expresses concern over the time that it is taking to develop a repair and/or replacement option to address the tube wear in the SONGS Units 2 & 3 steam generators. I can assure you that Mitsubishi Nuclear Energy Systems, Inc. ("MNES") and Mitsubishi Heavy Industries, Ltd. ("MHI") and together with MNES, "Mitsubishi") fully recognize the importance to SCE and its ratepayers of restoring the SONGS Units 2 & 3 to service as quickly as possible. To that end, Mitsubishi has been proceeding with diligence and dispatch in accordance with the Purchase Order to provide a mutually agreeable repair and/or replacement for the SONGS Unit 2 and Unit 3 steam generators.

As you note, since the detection of tube wear at SONGS Units 2 & 3, Mitsubishi and SCE have worked together cooperatively to determine the physical causes of the unexpected tube wear. This investigation has been difficult and time consuming because, as you know, the tube-to-tube wear ("TTW") observed at SONGS is a first-of-a-kind phenomenon never before experienced in an operating U tube steam generator. Evaluation of such first-of-a-kind phenomena is understandably more time consuming and involves more effort than does resolution of a known issue. Necessarily, any corrective action chosen must be based on a full understanding of the physical cause of the wear. As a result of our investigation, Mitsubishi has determined that the cause of this unexpected phenomenon is the combination of insufficient tube-to-AVB contact force and high localized thermal hydraulic conditions.

In parallel with the mechanistic cause investigation, Mitsubishi has been diligently considering numerous repair and/or replacement options to address the tube wear observed in the SONGS steam generators in accordance with its obligations under the Purchase Order. Since April 2012, Mitsubishi has been considering various approaches to improve both the tube support contact conditions and the thermal hydraulic conditions in order to prevent continuation of the tube wear. In the April to September timeframe, Mitsubishi performed preliminary studies including mock-up tests of various AVB repair configurations.



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Based on these preliminary studies, Mitsubishi selected three AVB repair options for further evaluation for which it conducted mock-up tests from September to November 2012 (witnessed in part by representatives of SCE and the Nuclear Regulatory Commission Staff). Mitsubishi has also communicated with SCE concerning the range of permissible operating parameters for the SONGS units in order to develop and evaluate different options for ameliorating thermal-hydraulic conditions in the SONGS steam generators. Throughout this process, Mitsubishi has kept SCE fully apprised of the different repair and/or replacement actions being considered for the SONGS steam generators in accordance with our obligations under the Purchase Order.

Thus, Mitsubishi has been proceeding with diligence and dispatch in accordance with the Purchase Order in order to provide a mutually agreeable repair and/or replacement for the SONGS Unit 2 and Unit 3 steam generators. Mitsubishi agrees with SCE that this repair and/or replacement should resolve the conditions that caused the tube-to-tube contact and wear so as to allow all four steam generators to return to service. Mitsubishi notes that this might be achieved by addressing either or both the tube support contact conditions and the thermal hydraulic conditions underlying the observed tube wear. The time required to achieve this return of service will depend on whether a repair or replacement is chosen as the mutually agreeable course of action under the Purchase Order. Replacement would obviously require a longer time to implement than a repair.

As requested in your November 28 letter, Mr Kadokami will provide you specific plans and schedules for repair and/or replacement of the SONGS Unit 2 and Unit 3 steam generators. Mitsubishi values the relationship and reputations that our companies have enjoyed and is fully committed and will continue to work with SCE to develop a mutually agreeable and appropriate method to address the tube wear in the steam generators at SONGS Unit 2 & 3 in accordance with the Purchase Order.

Sincerely yours,

A handwritten signature in cursive script, reading "Kiyoshi Yamauchi", is positioned above the printed name and title.

Kiyoshi Yamauchi
President and CEO
Mitsubishi Nuclear Energy Systems, Inc.

cc. Ei Kadokami



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